

Table 1 - Solids Geochemical Data

Parameter	Sample Test Results (Whole Rock/ICP Analysis)				Background	
	Unlined Evaporation Pond (USEPA sample T-7)	Lined Finger Evaporation Pond (USEPA sample T-8)	Middle Lined Evaporation Pond (USEPA sample T-9)	Sulfide Tailings (USEPA sample T-10)	Yerington Area (Shacklette, et al., 1984)	US Soils (Rose, et al., 1979)
Aluminum	6,600	16,000	17,000	21,000	70,000	n/a
Antimony	<20	<20	<30	<20	n/a	2
Arsenic	60	1,200	<20	<10	16 - 100	7.5
Barium	20	620	30	80	700	300
Beryllium	0.6	1.7	0.7	0.7	<1	0.5-4
Cadmium	3	3	1	<1	n/a	0.1-0.5
Calcium	33,000	900	38,000	13,000	18,000-28,000	n/a
Chromium	13	230	13	17	30	43
Cobalt	10	82	120	22	15 - 70	10
Copper	680	570	2,200	2,300	50 - 700	15
Iron	250,000	180,000	160,000	21,000	30,000	n/a
Lead	10	1,000	4	5	30 - 700	17
Magnesium	2,700	800	13,000	18,000	15,000-100,000	n/a
Manganese	230	30	900	170	700	320
Mercury	0.38	62	0.05	0.08	0.082-0.13	0.056
Nickel	14	160	50	20	15	17
Potassium	14,000	2,000	2,000	3,000	25,000-65,000	n/a
Selenium	5	320	<10	5	0.15-0.2	0.31
Silver	<3	3	<3	<2	n/a	n/a
Sodium	23,000	600	15,000	600	15,000-100,000	n/a
Thallium	90	100	<200	<100	n/a	n/a
Vanadium	34	33	26	53	150-500	n/a
Zinc	56	370	140	30	190-3,500	36

Notes:

All values in mg/kg = ppm

n/a=value not available or note measured

nc=non cancer effects, ca=cancer effects

Chromium as total Cr

Analytical reports are provided in Appendix A.

Table 2 - SPLP Sequential Leachate Results (NDEP 2002)

Parameter	Sample (all results in mg/L)							
	YVLT1-1	YVLT1-2	YVLT1-2D	YVLT1-3	YVLT3-1	YVLT3-2	YVLT3-2D	YVLT3-3
Aluminum	1.71	2.79	3.28	1.73	2.26	0.52	3.19	1.35
Arsenic	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Beryllium	0.117	0.116	0.102	0.149	0.134	0.180	0.122	0.140
Boron	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Calcium	175	195	192	158	232	170	157	154
Chromium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt	0.036	0.027	0.034	0.065	0.023	0.023	0.023	0.036
Copper	45.7	25.8	34.5	48.5	33.5	10.0	8.8	14.1
Iron	0.124	0.029	0.033	0.116	0.121	0.038	1.850	0.050
Lead	0.009	0.009	0.009	0.009	0.012	0.012	0.012	0.009
Magnesium	17.1	21.5	26.0	16.8	17.2	7.1	6.5	10.0
Manganese	0.401	0.336	0.417	0.689	0.253	0.092	0.082	0.200
Mercury	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005
Nickel	0.031	0.029	0.036	0.035	0.027	0.027	0.027	0.031
Potassium	1.83	1.24	1.33	1.35	2.57	2.91	2.92	2.08
Selenium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Silver	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sodium	18.9	15.6	14.0	16.5	18.6	15.1	12.7	15.6
Thallium	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Zinc	0.330	0.295	0.265	0.428	0.340	0.277	0.132	0.279
pH of final Leachate ^A	5.13	4.79	4.80	5.08	4.92	5.38	4.86	5.13

Notes:

^A Initial pH approximately 5.0

Analytical results from sequential leach testing (SPLP) conducted by NDEP (2002; see Appendix A)

"D" indicates Duplicate Sample

All analyses conducted using EPA Method 200.7 (ICP/AES)

Table 3 - Solids Sample Parameter List

Constituent (mg/L)	Method	Method Designation	Detection Limit	Units
Aluminum	ICP-OES	SW – 846 6010A	0.05	mg/kg
Antimony	ICP-MS	SW – 846 6020	1	mg/kg
Arsenic	ICP-MS	SW – 846 6020	1	mg/kg
Barium	ICP-MS	SW – 846 6020	1	mg/kg
Beryllium	ICP-OES	SW – 846 6010A	0.1	mg/kg
Boron	ICP-OES	SW – 846 6010A	0.05	mg/kg
Cadmium	ICP-MS	SW – 846 6020	1	mg/kg
Calcium	ICP-OES	SW – 846 6010A	0.1	mg/kg
Chromium	ICP-MS	SW – 846 6020	1	mg/kg
Cobalt	ICP-MS	SW – 846 6020	1	mg/kg
Copper	ICP-MS	SW – 846 6020	1	mg/kg
Iron	ICP-OES	SW – 846 6010A	0.05	mg/kg
Lead	ICP-MS	SW – 846 6020	1	mg/kg
Magnesium	ICP-OES	SW – 846 6010A	0.1	mg/kg
Manganese	ICP-MS	SW – 846 6020	1	mg/kg
Mercury	AA Cold Vapor	SW - 846 7471	0.05	mg/kg
Molybdenum	ICP-MS	SW – 846 6020	1	mg/kg
Nickel	ICP-MS	SW – 846 6020	1	mg/kg
Potassium	ICP-OES	SW – 846 6010A	0.5	mg/kg
Selenium	ICP-MS	SW – 846 6020	1	mg/kg
Silver	ICP-MS	SW – 846 6020	1	mg/kg
Sodium	ICP-OES	SW – 846 6010A	0.1	mg/kg
Thallium	ICP-MS	SW - 846 6020	1	mg/kg
Vanadium	ICP-MS	SW – 846 6020	1	mg/kg
Zinc	ICP-MS	SW – 846 6020	10	mg/kg

ICP: Inductively-Coupled Plasma

MS: Mass Spectroscopy

OES: Optical Emission Spectroscopy